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RESEARCH MEMORANDUM

HOSPITAL CORPSMAN A- AND C-SCHOOL SUCCESS: THE EFFECT OF ENTRY STANDARDS

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1. This research memorandum compares the entrance standards for A-school and C-school training in the Hospital Corpsman rating, estimates the number of recruits who do not meet the higher C-school standards, and assesses the potential for shortages in C-school training. The factors that influence A- and C-school performance were analyzed to assess the effect of changes in entrance standards on average training performance. Finally, policy options to increase the pool of eligible personnel for C-school training were evaluated. These options either raised A-school standards so that a higher proportion of graduates were from the upper aptitude categories or changed C-school standards to allow a higher proportion of graduates to attend.

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ABSTRACT

This research memorandum compares the entrance standards for A-school and C-school training in the Hospital Corpsman rating, estimates the number of recruits who do not meet the higher C-school standards, and assesses the potential for shortages in C-school training. The factors that influence A- and C-school performance were analyzed to assess the effect of changes in entrance standards on average training performance. Finally, policy options to increase the pool of eligible personnel for C-school training were evaluated. These options either raised A-school standards so that a higher proportion of graduates were from the upper aptitude categories or changed C-school standards to allow a higher proportion of graduates to attend.

EXECUTIVE SUMMARY

All Navy initial skill training (A-school) and some advanced skill training (C-school) have entrance standards. Usually, the entrance standards are aptitude requirements, but sometimes other factors such as education status are considered. Navy training entrance standards are important in avoiding the costs of attempting to train individuals who will be unsatisfactory performers. If the standards are artificially high, however, personnel who could learn the skills are not trained, and shortages of personnel with certain skills may be costly. The purpose of this research memorandum is to report work conducted for OP-132 concerning the entrance standards in one community--the Hospital Corpsman (HM) rating. That rating has C-school entrance standards that prevent some A-school graduates from attending. There is some concern that these standards are causing shortfalls in filling C-school seats.

Training data for the HM rating in two years (FY 1981 and FY 1985) were used to compare the entrance standards for A-school and C-school training; estimate the number of A-school graduates that do not meet the higher standards; and assess the potential for shortages in C-school. The major findings of that analysis are as follows:

- Recruits in aptitude category 3L and some from aptitude category 4 are allowed into the HM rating. A number of C-schools have requirements that allow essentially only recruits in aptitude category 3U and above to enter, and the most restricted C-schools allow only aptitude category 1 and 2 personnel.

- Based on the distribution of A-school graduates by aptitude category, the C-school entrance standards effectively eliminate 38 to 50 percent of A-school graduates from some C-schools and more than 60 percent from others.

- Data for a sample of Navy Enlisted Classifications (NECs) that account for 75 percent of HM C-school training indicate that the entrance standards are adhered to.

- A comparison of the number of upper-aptitude-category A-school graduates and C-school entrants was conducted for two years. The data indicated that the two numbers were about equal. Although this is not conclusive evidence of a shortage of qualified C-school entrants, it suggests that, at the very least, the potential for shortages exists.

The factors that influence A- and C-school performance were analyzed to assess the impact of entrance standards on average training performance. The results of this analysis revealed the following:

- Differences among the A-school attrition rates of different aptitude categories were generally small, but the difference between aptitude category 1 and 2 and aptitude category 4 recruits was 11 points in 1985 and only 6 in 1981. The effect of education was often larger than that.

- The model of performance in the eight advanced NECs selected indicated that scores on the Armed Forces Qualification Test (AFQT) had a small and statistically insignificant effect on the pass rate. Education, on the other hand, had a large, statistically significant effect. The difference in C-school training attrition between recruits with a diploma and those without was more than 10 percent.

- The timing of training appeared to affect training success as well, although the differences among groups were not statistically significant. The importance of education also varied with the timing of training. The difference in performance between diploma graduates and nongraduates is largest for personnel early in their careers.

Based on analysis of the factors influencing A- and C-school attrition, several policy options that could increase the pool of eligible recruits for C-school were examined. One set of options examined the cost of raising the aptitude standards as measured by AFQT for A-school entrance. A change in entrance standards that would lead to a 35-percent increase in the number of upper-aptitude-category graduates was estimated to raise recruiting costs by more than $3 million.

A second set of options considered the feasibility of changing C-school standards to allow more A-school graduates to attend. Table I describes these options and their effect on C-school performance. AFQT scores were found to have a minimal effect on the attrition rate, and, as a result, the estimated average attrition rate was predicted to increase by only half a percent if C-school entrance requirements were eliminated (case 1). In contrast, the effect of education was estimated to be very large. With current standards, requiring all students in advanced C-school courses to be diploma graduates (case 2) raised the predicted pass rate by 0.7 percent. In combination (case 3), the two changes in standards would substantially increase the pool of personnel that could attend the advanced C-schools, while not increasing the attrition rate.

It may be unreasonable to allow personnel, specifically nongraduates, into a rating but then preclude them from ever attending the advanced C-schools. Noting the interaction between education and the

timing of training, another set of options was examined. Case 4 allows nongraduates to attend advanced C-schools after completing at least one year of successful service. In this case, the pass rate increases, although not quite as much as not letting nongraduates attend at all. In fact, this type of policy, in conjunction with elimination of current entrance standards (case 5), would essentially double the number of personnel eligible to attend the advanced C-schools, with no estimated increase in training attrition.

Table I. Simulation of changes in C-school requirements

Case	Description	Pass rate (percent)	Change in pass rate (percent)
Base	Existing standards	89.5	--
1	Entrance standards eliminated	89.0	-0.5
2	HSDG[a] required	90.2	+0.7
3	Entrance standards eliminated, HSDG required	89.7	+0.2
4	Non-HSDG if experience	89.9	+0.4
5	Entrance standards eliminated, non-HSDG if experience	89.4	-0.1
4A	Non-HSDG if after reenlistment	90.0	+0.5
5A	Entrance standards eliminated, non-HSDG if after reenlistment	89.5	0.0

a. High school diploma graduate.

It is not known whether the results found for HM C-school training can be applied to other ratings as well. The apparently limited value of supplemental entrance standards for some C-schools is worth consideration if training in other ratings is managed similarly. Perhaps more importantly, the possibility of delaying advanced (and expensive) C-school training for nongraduates could be examined for a broader range of ratings.

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INTRODUCTION

All Navy initial skill training (A-school) and some advanced skill training (C-school) have entrance standards. Usually, the entrance standards are aptitude requirements, but sometimes other factors such as education status are considered. Navy training entrance standards are important in avoiding the costs of attempting to train individuals who will be unsatisfactory performers. If the standards are artificially high, however, personnel who could learn the skills are not being trained and shortages of personnel with certain skills may be costly. The purpose of this research memorandum is to report work conducted for OP-132 concerning the entrance standards in one community--the Hospital Corpsman (HM) rating. That rating has C-school entrance standards that prevent some A-school graduates from attending. There is some concern that these standards are causing shortfalls in filling C-school seats.

There are substantial differences between the entrance requirements for HM A-school training and some C-school courses in the same rating. This research memorandum describes those differences and the limits they place on some A-school graduates. The effect of student quality and other factors on attrition from A- and C-schools in this rating is also analyzed. The last section examines the impact of changing entrance standards for one or both types of school.

HM Training Entrance Standards

This section describes the entrance standards for training in the HM community. Table 1 describes the HM A- and C-school aptitude entrance requirements. These entrance requirements are based on Armed Services Vocational Aptitude Battery (ASVAB) composites. As indicated in the table, the ASVAB composites for A- and C-school are based on different ASVAB subtests. Not all HM C-schools have entrance requirements, and there are differences in requirements among C-schools that do. The entrance requirement for the C-school courses analyzed in this memorandum match one of the two sets of requirements shown in table 1.

One problem in analyzing the effect of ASVAB entry standards is that reliable data on the scores on the ASVAB subtests are not available for many individuals. Calculating the composite for all personnel would be difficult at best. For this analysis, the ASVAB composites have been translated into their estimated average Armed Forces Qualification Test (AFQT) percentile scores. Although the AFQT itself is no longer administered, the Department of Defense (DOD) requires the services to compute an AFQT percentile from certain ASVAB subtests. The aptitude category classification used by recruiting is based on the AFQT percentiles. In addition, the AFQT percentile scores are available on CNA data files.

Table 1. HM A-school and C-school ASVAB/AFQT requirements

	ASVAB (composite)	AFQT percentile	Aptitude category
A-school	141 (VE+MK+GS)	37	3L
C-school	105	51	3U
	110 (VE+AR)	69	2

SOURCE: ASVAB requirements were obtained from OP-132C9.

The ASVAB requirements were translated into AFQT percentiles using the results from previous CNA analysis [1]. Appendix A details this analysis. Briefly, in that study, the relationship between ASVAB composite scores and AFQT percentiles was derived using data from the National Opinion Research Center's (NORC's) sample of the youth population. The study provided the distribution of the sample composite scores at fixed AFQT levels. The AFQT percentile that corresponds to the HM ASVAB requirement in table 1 is the NORC sample average AFQT percentile that most closely corresponds to the ASVAB composite score requirement. As the HM ASVAB composite and AFQT scores are highly correlated (see appendix A), the translated AFQT requirements should allow for an assessment of changes in the ASVAB-based aptitude requirements.

The AFQT percentile required for the HM schools indicates there are large differences in the aptitude requirements for HM A- and C-schools. Essentially, HM A-school entry requires personnel to score in the 37th percentile or higher; entry into certain HM C-schools requires HMs to be in the 69th percentile or higher and in the 51st percentile or higher for others. In terms of aptitude categories, recruits in aptitude category 3 lower (3L) and some from aptitude category 4 can enter the HM A-school but will not meet the requirements for certain HM C-schools.

Quality of HM Personnel in A- and C-School Training

To determine the number of the HM personnel that will not qualify for HM C-schools, table 2 gives the distribution of HM A-school

graduates by aptitude category for FY 1981 and FY 1985.[1] Although it varies from year to year, 37 percent, on average, of the graduates from HM A-schools are in aptitude category 2 or higher. The majority of these students meet the requirements for the most restricted C-schools.[2] The majority of students in aptitude category 3U and above meet the standards for the other C-schools. For the two years examined, between 61 and 65 percent of the graduates of HM A-schools do not meet the highest HM C-school aptitude category requirement, and between 38 and 50 percent of the graduates do not meet the requirement for the others. Whether this is a problem depends on whether the HM community adheres to the C-school enrollment restrictions and whether the restrictions lead to shortages of personnel with the skills. The first condition is analyzed next.

Table 2. Distribution of HM A-school graduates by aptitude category

Aptitude category (AFQT percentile)	Number of graduates (column percentage) FY 1981	FY 1985
1-2 (65-99)	1,671 (38.5)	1,552 (34.6)
3U (50-64)	999 (23.0)	703 (15.7)
3L (31-49)	790 (18.2)	726 (16.2)
4 (10-30)	774 (17.8)	1,127 (25.1)
Unknown	108 (2.5)	375 (8.4)
Total	4,342	4,483

1. Appendix B includes additional data on the types of students in A-school. The distribution of entrants into the HM school is compared to other ratings' A-schools. Training data are from the CNA Student History File [2].

2. The aptitude categories do not match the AFQT percentile entrance standards exactly. For example, individuals in aptitude categories 1 and 2 with AFQT percentile between 65 and 69 do not meet the entrance standards. Using aptitude categories 1 and 2 provides a conservative estimate of the individuals that do not qualify.

The C-school training courses from 9 of the 33 HM Navy Enlisted Classifications (NECs) were selected to analyze the types of students in these advanced courses. The NECs represent a limited sample of the HM NECs but were selected based on the size of the inventory of HM NECs in FY 1985. These nine NECs accounted for 76 percent of the C-school training load in 1985.[1] Table 3 describes the nine NECs and the associated C-school courses. Included in this description is the NEC number and title, the C-school Course Identifying Number (CIN), the planned length of the course, and the ASVAB requirement for the school. The planned length of the course is from the FY 1985 Master Course Reference File (MCRF) and is measured in calendar days.

Table 3. Description of HM C-school training

NEC	Title	Course ID number	Course length (days)	ASVAB requirement[a]
8404	Medical Field Service Technician	B3000013	36	--
8425	Advanced Hospital Corpsman	B3000019	320	110
8432	Preventive Medicine Technician	B3220012	180	110
8452	Advanced X-Ray Technician	B3130026	365	105
8477	Biomedical Equipment Technician	B1980010	103	105
8482	Pharmacy Technician	B3120025	159	105
8483	Operating Room Technician	B3010033	180	105
8501	Laboratory Technician, Basic	B3110011	105	105
8506	Medical Laboratory Technician	B3110018	378	105

a. All are scores for composite VE + AR.

The first NEC listed, NEC 8404, differs from the other eight NECs in two important ways. First, it is a basic NEC, and the course length is much shorter than the others. In 1985, NEC 8404 accounted for 43 percent of the course entrants but only 17 percent of the training days. In contrast, the other eight NECs in the sample accounted for 25 percent of the courses started but 60 percent of the training load. Second, aptitude requirements differ. Eight of the NECs are advanced NECs with aptitude entrance requirements. NEC 8404 has no entrance standard.

Table 4 gives the distribution of HM C-school entrants by aptitude category for the nine NECs selected. Few students in lower aptitude

1. Supporting data of the training load for all HM NECs are included in appendix B.

categories attend the advanced NECs. The HM community adheres, although not strictly, to the aptitude entrance standards in C-schools. Students in all aptitude categories attend NEC 8404. The distribution of personnel enrolled in training for this NEC is more like the distribution of graduates of A-school than the distribution for NECs with additional aptitude standards.

Table 4. Distribution of HM C-school entrants by aptitude category

	Number of entrants (column percentage)			
	Advanced		NEC 8404	
Aptitude category (AFQT percentile)	FY 1981	FY 1985	FY 1981	FY 1985
1-2 (65-99)	564 (59.4)	678 (70.5)	299 (36.8)	512 (36.3)
3U (50-64)	232 (24.4)	177 (18.4)	224 (27.6)	301 (21.4)
3L (31-49)	117 (12.3)	86 (8.9)	172 (21.2)	255 (18.1)
4 (10-30)	36 (3.8)	21 (2.2)	118 (14.5)	341 (24.2)
Total	949	962	813	1,409

Potential NEC Shortages

As indicated in the previous tables, a substantial portion of A-school graduates do not meet the entrance requirements for some C-schools. The data also indicate that those entrance standards are generally enforced. The question remains, however, whether the fact that the pool of eligible personnel for C-school is smaller than the pool of A-school graduates causes a shortfall in C-school training. Finding an answer to that question requires a comparison of the actual training conducted and the training requirement. A more complete answer would require analysis of the accuracy of the training requirement itself. Analysis of those issues is beyond the scope of this effort.

A general indication of whether a problem exists can be gathered from a comparison of the number of entrants in C-schools with ASVAB restrictions and the number of qualified (i.e., upper aptitude category) A-school graduates. If, for example, the two numbers are similar, it could indicate that C-school courses are constrained by the limited

supply of qualified personnel. If, on the other hand, the number of C-school entrants equals 10 percent of the pool of qualified personnel, the restrictions that limit the size of the qualified pool are unlikely to cause shortages.

In 1985, 3,240 personnel attended C-school courses.[1] The number of upper-aptitude-category A-school graduates necessary to support that training load is calculated in the following manner. There were 1,409 students who attended courses associated with NEC 8404, of whom 813 were from the upper aptitude category. Of the remaining 1,831 students attending HM C-schools, it was assumed that 90 percent (1,648) were from the upper aptitude category, based on the distribution in table 4. Using this methodology, the number of upper-aptitude-category students attending all HM C-schools in 1985 was estimated to be 2,461. This is slightly larger than the number of upper-aptitude-category A-school graduates in that year (2,255). In 1981, the situation was reversed, with slightly more upper-aptitude-category A-school graduates (2,670) than C-school entrants (2,003).

In both years, the number of upper-aptitude-category A-school graduates and the number of C-school entrants were comparable. This evidence suggests that the size of the pool of personnel qualified for advanced C-schools may limit the number of personnel sent to some C-schools. The evidence is not conclusive, but the concern that the disparity between A-school and C-school entrance standards could cause shortages in some NECs cannot be dismissed.

HM A-SCHOOL PERFORMANCE

Aptitude entrance standards suggest that success in training depends on aptitude. Although this contention is reasonable, the relationship between aptitude and success in training should be examined. Previous CNA work examined attrition by type of student from selected A-schools [3]. Table 5 summarizes the data for the HM A-school. Pass and attrition rates for the HM A-school were computed for FY 1981 and FY 1985 and seven quality groups ofstudents. The quality groups are defined based on the four aptitude categories and high school diploma status (with or without diploma).

The overall pass rate for the HM A-school is 94 percent in FY 1981 and falls to 92 percent in FY 1985. The attrition rate is quite low relative to other technical ratings in which attrition rates have been found to be as high as 30 percent [3]. Similar to other nontechnical ratings, the largest differences in attrition from the HM A-school are found in non-academic attrition rates across educational groups. In

1. Some personnel may have attended more than one course; they are double-counted in this number. Appendix B provides additional data on the HM training load.

TABLE 5

HM A-SCHOOL PERFORMANCE BY QUALITY GROUP

A-School Performance: 1981

HM		AU	AL	BU	BL	CU	CL	DU	TOTS
6084	P	0.97	0.96	0.94	0.86	0.96	0.90	0.80	0.94
	K	0.01	0.01	0.01	0.02	0.01	0.05	0.10	0.02
	L	0.02	0.02	0.05	0.11	0.03	0.05	0.10	0.03
	N	954	483	141	88	373	473	70	2640
OR									
6085	P	0.97	0.93	0.95	0.89	0.96	0.92	0.83	0.94
	K	0.01	0.02	0.01	0.04	0.01	0.04	0.06	0.02
	L	0.02	0.05	0.04	0.07	0.03	0.05	0.10	0.04
	N	473	344	103	84	269	301	78	1702
PIPE P		0.97	0.95	0.95	0.88	0.96	0.91	0.82	0.94
PIPE K		0.01	0.02	0.01	0.03	0.01	0.05	0.08	0.02
PIPE L		0.02	0.03	0.05	0.09	0.03	0.05	0.10	0.04

A-School Performance: 1985

HM		AU	AL	BU	BL	CU	CL	DU	TOTS
6084	P	0.98	0.96	0.89	0.74	0.93	0.87	0.86	0.93
	K	0.01	0.01	0.03	0.13	0.03	0.09	0.10	0.04
	L	0.02	0.03	0.09	0.13	0.04	0.04	0.03	0.03
	N	952	447	105	69	466	849	59	3202
OR									
6085	P	0.97	0.90	0.89	0.84	0.89	0.85	0.70	0.90
	K	0.01	0.06	0.00	0.06	0.05	0.08	0.06	0.04
	L	0.03	0.03	0.11	0.09	0.07	0.07	0.24	0.05
	N	439	155	56	32	168	278	33	1281
PIPE P		0.97	0.95	0.89	0.77	0.92	0.86	0.80	0.92
PIPE K		0.01	0.02	0.02	0.11	0.03	0.09	0.09	0.04
PIPE L		0.02	0.03	0.09	0.12	0.05	0.05	0.11	0.04

Definitions

AU= HSDG,1-2
AL= HSDG,3U
BU= NHS,1-2
BL= NHS,3U
CU=HSDG,3L
CL=HSDG,4
DU=NHS,3L
P=PASS RATE
K=ACADEMIC ATTRITION
L=NONACADEMIC ATTRITION
N=NUMBER OF ENTRANTS

Estimated total attrition rates are computed from all individuals in the data set.
For some students either aptitude category or HSD status was not known.

FY 1981, for example, the upper-aptitude-category nongraduates (BU and BL groups) had over three times the non-academic attrition of the upper-aptitude-category graduates (AU and AL groups).

Differences in attrition across aptitude categories are interesting. There is virtually no difference in attrition, holding educational status constant, between 3L (CU) and higher aptitude categories 3U (AL) or 1-2 (AU). However, differences in attrition between aptitude categories 3L (CU) and 4 (CL) are larger--a 3-percent difference in FY 1981 to over 6-percent difference in FY 1985. These differences may be important because a large proportion of students were in aptitude category 4--25 percent in FY 1985 (see table 2).

HM C-SCHOOL TRAINING PERFORMANCE

Most analyses of training attrition have focused on A-school. The factors affecting C-school attrition in the HM rating need to be understood, however, to evaluate whether the current entrance standards are set correctly.

Description of HM C-School Data Set

The data set used to analyze the determinants of performance in HM C-schools contains data on HM personnel who entered one of the courses required for qualification for the nine different NECs (described in table 3) in FY 1981 or FY 1985. Data on the progress or attrition of all students entering one of these courses in FY 1981 or FY 1985 were extracted from the CNA Student History File [2]. Table 6 contains a description of this data set. Statistics for all the advanced NECs and for NEC 8404 are given separately. The objective of this analysis is to determine the student characteristics that affect performance, as measured by passing the course, in these HM C-schools. Because NEC 8404 is different from the other NECs, it is analyzed separately. The number of entrants, given in the first line of table 6, is the number of observations used in this analysis. Of the entrants in the advanced NECs, about one-half took one of the courses in FY 1981 and the other half took one of the courses in FY 1985. Over one-third of the entrants for NEC 8404 are in FY 1981; the remainder are in FY 1985.

The overall percentage of students who passed the course is also given in table 6. The pass rate for the advanced NECs is 88.2 percent. Almost all the students who take the course for NEC 8404 pass; the attrition rate is less than half of 1 percent.

The logit regression model is used to model the relationship between student characteristics and probability of passing an HM C-school course. This model is appropriate when the dependent variable has two possible values--1 if the student passes the course and 0 if the student fails. The set of explanatory variables is described in table 6. The AFQT of the student is used to estimate the relationship between

aptitude and the probability of passing. The average AFQT for students in the advanced NECs is much higher than the average AFQT for students enrolled in the NEC 8404 course. Educational status is also assumed to affect the probability of passing. Almost 92 percent of the HMs enrolled in the advanced training courses are high school diploma graduates (HSDGs); a smaller percentage enrolled in NEC 8404 have diplomas.

Table 6. Description of HM C-school data set

Variable	Advanced NECs	NEC 8404
Number of entrants	1,911	2,222
Percent FY 1981 entrants	49.7	36.6
Percent FY 1985 entrants	50.3	63.4
Percent pass	88.2	99.8
Mean AFQT	71.0	58.8
Percent HSDG	91.8	90.8
Mean LOS	3.2	2.8
Percent FOLLOW	40.7	38.9
Percent FIRST TERM	34.8	47.9
Percent CAREER	24.5	13.2
Percent MALE	83.3	98.2

The length of service (LOS) of an individual is also expected to affect performance in training. Individuals who have experience in the Navy, as well as in using the HM skills, may perform better in school than individuals who have not been in the Navy for as long. The average LOS of students in the advanced NECs is a little over three years. There is some variation in when the students are trained. Three categories of when students attend C-school were defined. The first category (FOLLOW) are students who take the course in their first year of service. These students are presumably enrolled in the course directly following A-school. About 41 percent of the HMs in these data receive some C-school training in their first year of service. Students in the first-term category (TERM1) are those that take the training between two and four years of service. These students, about 35 percent of the advanced NEC entrants and almost 48 percent of NEC 8404 entrants, are in their first term of service but presumably have had some experience after A-school. The final category (CAREER) includes students who have enrolled in the course after their fourth year of service, presumably after their first reenlistment point.

One additional explanatory variable--student gender--is included. The majority of the HMs are male, although differences in pass rates by sex are examined.

Determinants of C-School Training Success

Table 7 shows the results of the logistic estimates of the relationship between the independent variables and the probability of passing. Separate estimates for NEC 8404 were also derived and are reported in table 7. The overall pass rate for NEC 8404 was 99.8 percent; the predicted pass rate is 100 percent, and, not surprisingly, virtually none of the independent variables are statistically significant.

Table 7. Logit model results on HM C-school performance

	Advanced NECs	NEC 8404
Number of observations	1,911	2,222
Log likelihood	-665.4	-26.5

	Advanced NECs			NEC 8404[a]		
Variable	Coefficient	T-ratio	Mean	Coefficient	T-ratio	Mean
ONE	0.436	0.8	1.00	29.211	0.0	1.00
AFQT	0.005	1.0	71.00	0.014	0.6	58.79
HSDG	0.955	4.5[b]	0.92	-12.853	-0.0	0.91
FOLLOW	-0.004	-0.0	0.41	14.666	0.0	0.39
TERM1	0.374	1.4	0.35	2.990	2.6	0.48
MALE	-0.211	-1.0	0.83	-13.465	-0.0	0.98
FY 1981	0.531	3.4[b]	0.50	13.208	0.0	0.37
NEC 8425	0.443	1.3	0.13			
NEC 8432	0.276	0.7	0.06			
NEC 8452	0.743	1.9[b]	0.07			
NEC 8477	0.612	1.2	0.03			
NEC 8482	0.194	0.7	0.16			
NEC 8483	-0.099	-0.4	0.27			
NEC 8501	0.536	1.8	0.16			

a. The size of the coefficients estimated in the logit model depends both on the importance of the variable and on the mean value of the attrition rate. In this case, where the pass rate is virtually 100 percent, the estimated coefficients may be very large even though their effect on attrition is small.
b. Statistically significant at the 5-percent level.

In the model for the advanced NECs it should be noted that in addition to the variables described in table 6, dummy variables for each NEC were included. These variables should control for differences in difficulty in acquiring the skills across the NECs. The excluded NEC is NEC 8506.

The predicted pass rate, using mean values of the explanatory variables for the advanced NECs, is 89.3 percent. Of the student characteristics, only the educational status is statistically significant. The AFQT variable, although the right sign, is small and insignificant. In fact, the effect of increases in AFQT is negligible. Using the estimated coefficient and the mean value of all other variables, the model indicates that to increase an individual's pass rate by half a percentage point requires an increase in the average AFQT of ten points--approximately one standard deviation.[1]

There are no statistically significant differences in the pass rate for males and females. Other factors constant, the predicted pass rates for students who take the course in their first year and for the career personnel are the same. Those students who take the course later in their first term have slightly higher pass rates, but the difference is not statistically significant. Finally, there are differences in attrition across the two fiscal years--the predicted pass rate for FY 1985 is 86.5 percent, and for FY 1981 the predicted rate is 91.6 percent. The increase in attrition between FY 1981 and FY 1985 is consistent with other analysis of A-school attrition.

The regression results suggest that high school diploma status of the students in the HM C-schools affects the attrition in these schools. Table 8 provides information on the size of differences in the pass rates for students with different educational status, including the predicted pass rates for the sample and for each NEC by educational group. For all the NECs analyzed, other things constant, the pass rate for high school diploma students is over ten percentage points higher than for nongraduates. There is some variation across the NECs because the mean pass rates vary.

Attrition from training may be for motivational or disciplinary reasons. Evidence, from analysis of A-school attrition by reason, suggests that non-academic attrition is the primary difference in attrition between students of different educational status. It may be that differences in C-school training attrition by educational group are also a function of non-academic attrition rather than differences in a student's academic ability to acquire the advanced skills. Experience in the Navy as well as the HM skills may be an effective screen of these types of motivational problems. To analyze this, interaction terms between educational status and the experience variables were included in the model. The regression results are reported in table 9, and the

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1. One valid methodological objection (in predicting the aptitude effect) is that a selectivity problem arises in using the AFQT variable if, in fact, students with low AFQT percentile scores have a higher than predicted HM ASVAB composite. The high correlation between the scores (see appendix A) reduces the possibility of this bias. A selectivity bias estimation technique could be used if data on the ASVAB composites were available.

Table 8. Predicted C-school pass rates by NEC and education

	Percent pass		
Variable	Total	HSDG	Non-HSDG
All NECs	89.3	90.0	77.6
NEC 8425	91.1	91.7	81.0
NEC 8432	89.7	90.4	78.3
NEC 8452	93.3	93.7	85.2
NEC 8477	92.4	92.9	83.5
NEC 8482	88.9	89.6	76.9
NEC 8483	85.6	86.6	71.3
NEC 8501	91.8	92.4	82.4
NEC 8506	86.8	87.7	73.2

Table 9. HM C-school performance regression results

Number of observations: 1,911
Log likelihood: -663.7

Variable	Coefficient	T-ratio	Mean
ONE	0.100	0.7	1.00
AFQT	0.005	0.9	71.00
NON-HSDG*TERM1	0.738	1.4	0.02
NON-HSDG*CAREER	0.782	1.5	0.03
HSDG*FOLLOW	1.330	4.4[a]	0.37
HSDG*TERM1	1.648	5.1[a]	0.33
HSDG*CAREER	1.190	3.1[a]	0.22
MALE	-0.204	-0.9	0.83
FY 1981	0.552	3.5[a]	0.50
NEC 8425	0.448	1.3	0.13
NEC 8432	0.279	0.7	0.06
NEC 8452	0.742	1.9[a]	0.07
NEC 8477	0.564	1.1	0.03
NEC 8482	0.233	0.8	0.16
NEC 8483	-0.098	-0.4	0.27
NEC 8501	0.556	1.9[a]	0.16

a. Statistically significant at the 5-percent level.

estimated predicted pass rates by education and experience group are reported in table 10. These results indicate that there are differences between educational groups by experience level. C-school attrition for nongraduates who attend C-school directly after A-school is predicted to be 20 points higher than for graduates. The difference is 10 points later in the first term and only 5 for careerists.

Table 10. Predicted C-school pass rates by education and experience

	Percent pass		
Variable	HSDG	Non-HSDG	Total
All NECs	90.1	77.8	89.3
FOLLOW (LOS 1)	89.4	69.1	88.4
TERM1 (LOS 2-4)	92.1	82.4	91.7
CAREER (LOS 4)	88.0	83.0	87.5

A chi-square test of whether the interaction effects improved the fit of the model can be conducted by comparing the log likelihood in tables 7 and 9. Two times the difference in the likelihoods (3.4) is distributed as a chi-square variable. This is less than the .10 critical value of the distribution (4.6), although it is greater than the .20 critical value. These results suggest that although there is evidence that the effect of education varies with experience, that evidence is not conclusive. The estimates in table 9 are used in the remainder of this research memorandum, but they should be interpreted with this caution in mind.

POLICY OPTIONS

The fact that HM A-school entrance standards are substantially lower than the standards in some C-schools creates a potential problem. If too many of the A-school graduates do not qualify for specific C-schools, there is the potential for shortages in those specific fields. This research memorandum does not directly address the issue of whether shortages of qualified C-school entrants exist.

If, in fact, a shortage of qualified C-school entrants does exist, there are several potential solutions. Using the results presented in this analysis on the effect of entrance standards on success in school,

two options are explored. The first explores the costs of raising the ASVAB standards for A-school. Raising A-school standards would mean that a larger proportion of A-school graduates would be qualified to enter those C-schools that have additional standards. Recruiting additional high-quality personnel can be expensive, however. It is also possible that C-school entrance standards are artificially high. The second option analyzes the potential for changing the standards for C-school without substantially increasing attrition in C-school.

Table 11 displays the impact of increasing ASVAB standards for entry into the HM rating.[1] Column 1 displays the 1985 distribution of A-school entrants by aptitude category, the pass rate, and the resulting number of graduates.[2] Column 2 simulates a change in the ASVAB standards that eliminates all aptitude category 4 recruits and replaces them with recruits from the other aptitude categories. The relative proportions among the other three categories are held constant. In this experiment, the number of successful graduates is held constant, and because the pass rate increases, the total number of entrants declines. Column 3 displays the number of additional recruits in each aptitude category. Column 4 displays the results of allowing only upper-aptitude-category recruits into the rating. In this case, all A-school graduates would be qualified for most C-school courses.

Approximations of the additional recruiting costs to the Navy of each of the experiments are displayed in the last row of columns 2 and 4. In the first case, the number of recruits qualified for the most restricted C-schools is increased by 35 percent at a cost of almost $3.3 million. In the second, that number is increased by 75 percent for a cost of near $4.9 million. These cost figures are not precise and are shown to provide an idea of the order of magnitude of the costs associated with changes in A-school standards.

It is clearly expensive to increase the number of recruits completing the HM A-school pipeline who are qualified for C-school at current standards. If entrance standards can be changed in some way, more A-school graduates could attend without reducing C-school performance substantially, resulting in potential savings.[3]

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1. As before, the analysis is conducted using AFQT levels as proxies for specific ASVAB composites.
2. Recruits whose aptitude category or educational categories were not identified are not included in the calculation. This results in an undercount of recruits of almost 10 percent.
3. In this analysis, the only measure of C-school performance used is the pass rate. It is possible that less qualified students may pass the course at only a slightly lower rate but have substantially lower ability. In work not reported here, the authors found that among people who passed C-school courses, there was no correlation between quality and the amount of time necessary to complete the course. To the extent that time in school is a measure of academic performance, there appears to be no appreciable difference across quality groups.

Table 11. Simulation of changes in A-school requirements

Aptitude category	FY 1985 entrants (1)	Case 1 entrants (2)	Change (3)	Case 2 entrants (4)	Change (5)
1-2	1,552	2,092	540	2,732	1,180
3U	703	946	243	1,236	533
3L	726	978	252	--	-726
4	1,127	--	--	--	--
Total	4,108	4,016	--	3,968	--
Pass rate	0.917	0.939	--	0.949	--
Graduates	3,767	--	--	--	--
Additional cost (millions)	--	$3.27	--	$4.86	--

NOTE: Recruiting cost assumptions are $3,600 for upper-aptitude-category recruits and $1,800 for category 3L recruits, with category 4 recruits assumed to be free to recruit. The upper-aptitude-category cost is derived by dividing the average cost of a recruiter (approximately $36,000) by the average number of aptitude category HSDG contracts per recruiter (approximately nine) and adjusting the $4,000 result to account for the 10 percent of upper-aptitude-category recruits who are not HSDGs. In the absence of any estimates of the cost of category 3L recruits, they were assumed to be half as expensive.

Table 12 presents the results of several simulated changes in C-school entrance standards. The predicted attrition rates for the group of eight advanced NECs are compared for various sets of C-school requirements. The predicted attrition rate, using mean values for all the variables in the model displayed in table 9, is shown in the first row as a base case. For each simulation, the predicted pass rate and the change from the base case are displayed.

Case 1 shows the predicted effect of having no C-school standards in addition to those required to attend A-school. The simulation assumes that the aptitude category distribution of students attending advanced C-schools was equivalent to the distribution of A-school graduates. As a result of that change, the average AFQT among these students was assumed to fall from 70.9 to 60.7. The change in the predicted attrition rate is half a percentage point. Although the attrition rate does increase by a slight amount, the pool of personnel eligible for the advanced courses essentially doubles.

Table 12. Simulation of changes in C-school requirements

Case	Description	Pass rate (percent)	Change in pass rate (percent)
Base	Existing standards	89.5	--
1	Entrance standards eliminated	89.0	-0.5
2	HSDG required	90.2	+0.7
3	Entrance standards eliminated, HSDG required	89.7	+0.2
4	Non-HSDG if experience	89.9	+0.4
5	Entrance standards eliminated, non-HSDG if experience	89.4	-0.1
4A	Non-HSDG if after reenlistment	90.0	+0.5
5A	Entrance standards eliminated, non-HSDG if after reenlistment	89.5	0.0

It should be noted that these estimates are based on a sample with virtually no observations in the lower end of the aptitude category distribution. The logit estimates indicate that AFQT scores have a miniscule effect on attrition, but it is possible that the effect would become more substantial if data from the lower end of the AFQT distribution were added. It may not be advisable to totally eliminate C-school standards without further evidence, but these results indicate that the standards could be loosened without an appreciable decline in the proportion of students successfully completing C-school.

Case 2 examines the impact of tightening the entrance standards, not by changing the ASVAB requirement but by allowing only high school diploma graduates to attend C-schools. Although this change in standards decreases the size of the pool eligible for some C-schools by 9 percent, the restriction raises the predicted pass rate by 0.7 percent. Case 3 shows the combined effect of the first two changes. By eliminating current C-school entrance standards but requiring all students to be HSDGs, both the pool of students eligible for the courses and the predicted pass rate are increased. This somewhat surprising result occurs because education status has a much larger effect on attrition than does AFQT.

It may not be reasonable to create a policy in which some recruits, specifically nongraduates, are allowed into a rating but then prohibited

from ever attending advanced C-schools. As noted in table 10, the difference in attrition between HSDGs and nongraduates is larger for first-termers than for career personnel and is even larger for personnel who go to C-school right after A-school. Cases 4 and 5 examine the effect of a policy that allows nongraduates to attend C-school but not directly after A-school. In case 4, the existing C-school entrance standards are maintained; in case 5, they are eliminated. Cases 4A and 5A are similar, but the restrictions are slightly tighter. In these cases, nongraduates are not allowed to attend the advanced C-schools until their second term.

Case 4 is comparable to the existing standards with the exception of not allowing nongraduates to attend advanced C-schools until they have served in a billet for a year or more. This simple restriction increases the pass rate by 0.4 percent. The simulation shown in case 5 eliminates any entrance requirements for the C-schools, with the only restriction being the requirement that nongraduates must successfully complete a year in the Navy before attending. The predicted C-school pass rate in this case is virtually identical to the rate that uses existing standards. The additional requirement imposed in cases 4A and 5A raised the pass rate by only one-tenth of a percent.

SUMMARY

This research memorandum compares the entrance standards for A-school and C-school training in the HM rating, estimates the number of recruits who do not meet the higher standards, and assesses the potential for shortages in C-school training. The factors that influence A- and C-school performance were analyzed to assess the impact of changes in entrance standards on average training performance. Finally, policy options to increase the pool of personnel eligible for C-school were evaluated. These options either raised A-school standards so that a higher proportion of graduates were from the upper aptitude categories or changed C-school standards to allow a higher proportion of graduates to attend with no change in the average performance of graduates.

The minimum ASVAB standards for admission to HM A-school are equivalent to an average score of 37 on the AFQT. As a result, most recruits in aptitude category 3L and some from aptitude category 4 are allowed into the rating. A number of C-schools have requirements that allow essentially only recruits in aptitude category 3U and above to enter, and the most restrictive C-schools allow only aptitude category 1 and 2 personnel. This effectively eliminates 38 to 50 percent of A-school graduates for some C-schools and more than 60 percent from others. Data for a sample of NECs that account for 75 percent of HM C-school training indicate that the entrance standards are adhered to.

The fact that C-school standards are more restrictive than those for A-schools does not by itself imply that there will be insufficient personnel to fill C-school seats. A definitive analysis of the issue

was not undertaken here, but a comparison of the number of upper-aptitude-category A-school graduates and C-school entrants was conducted for two years. The data indicated that the two numbers were about equal. Although this is not conclusive evidence of a shortage of qualified C-school entrants, it suggests that, at the very least, the potential for shortages exists.

Using results of early CNA work [3], the effect of education and aptitude category on A-school attrition was examined. There were small differences among the attrition rates of different aptitude categories, but the difference between aptitude category 1 and 2 and aptitude category 4 recruits was 11 points in 1985 and only 6 in 1981. The effect of education was often larger than that.

New analysis of the factors affecting C-school performance was conducted. The model of performance in the eight advanced NECs selected indicated that AFQT score had a small and statistically insignificant effect on the pass rate. Education, on the other hand, had a large and statistically significant effect. The difference between recruits with a diploma and those without was more than 10 percent. The timing of training appeared to have an effect on training success as well, although the differences among groups were not statistically significant. The importance of education also varied with the timing of training. The difference in performance between diploma graduates and nongraduates is largest for personnel early in their careers.

Based on analysis of the factors influencing A- and C-school attrition, several policy options that could increase the pool of C-school eligible recruits were examined. One set of options examined the cost of raising A-school entry standards. An increase in entry standards that would lead to a 35-percent increase in the number of upper-aptitude-category graduates was estimated to raise recruiting costs by more than $3 million.

A second set of options considered the feasibility of changing C-school standards to allow more A-school graduates to attend. AFQT scores were found to have a minimal effect on the attrition rate, and, as a result, the estimated average attrition rate was predicted to increase by only half a percent if C-school entry requirements were eliminated. In contrast, the effect of education was estimated to be very large. Requiring all students in advanced C-schools courses to be diploma graduates raised the predicted pass rate by 0.7 percent. In combination, the two changes in standards would substantially increase the pool of personnel that could attend the advanced C-schools while not increasing the attrition rate.

It may be unreasonable to allow personnel, specifically nongraduates, into a rating but then preclude them from ever attending the

advanced C-schools.[1] Noting that interaction between education and the timing of training play a role in training success, another set of options was examined. Allowing nongraduates to attend advanced C-schools only after completing at least one year of successful service increased the pass rate, although not quite as much as precluding them from attending the schools. In fact, this type of policy in conjunction with elimination of entry standards would essentially double the number of personnel eligible to attend the advanced C-schools with no estimated increase in training attrition.

It is not known whether the results found for HM C-school training can be applied to other ratings as well. The apparently limited value of supplemental entry standards for some C-school is worth consideration if training in other ratings is managed similarly. Perhaps more importantly, the possibility of delaying advanced (and expensive) C-school training for nongraduates could be examined for a broader range of ratings.

1. In light of the findings presented here, a similar argument might be made for lower-aptitude-category recruits as well.

REFERENCES

[1] CNA Research Memorandum 85-2, *Determining Goals for Upper-Mental-Group Recruits*, by Gary F. Johnson, Cdr., USN, and Robert F. Lockman, Jan 1985 (27850002)[1]

[2] CNA Research Memorandum 87-46, *A Guide to CNA Individual Training Data Sets*, by Patricia E. Byrnes, et al., Mar 1987 (27870046)

[3] CNA Research Memorandum 88-76, *The Role of Student Quality in A-School Training Attrition: Trends in Selected Ratings*, by Patricia E. Byrnes, Alan J. Marcus, and Janet E. Thomason, Jul 1988 (27880076)

1. The numbers in parentheses are internal CNA control numbers.

APPENDIX A

COMPARISON OF ASVAB AND APTITUDE CATEGORY REQUIREMENTS

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COMPARISON OF ASVAB AND APTITUDE CATEGORY REQUIREMENTS

The relationship between the HM ASVAB requirements and aptitude category (or AFQT percentiles) provided in table 1 of the text is estimated based on the National Opinion Research Center's (NORC's) sample of the youth population. Two assumptions are made in using that relationship between the ASVAB and AFQT percentile. First, ASVAB composites and AFQT percentiles are not perfectly correlated. For example, some recruits with AFQT less than 37 (below aptitude category 3 lower) could qualify for HM A-school. Other recruits in higher aptitude categories might not qualify if they did not score higher than the required maximum on the particular HM composite. To determine whether this is a problem for the comparison of HM A- and C-school requirements, analysis of the NORC sample was conducted. Table A-1 summarizes this analysis.

Table A-1. Distribution of NORC sample by aptitude category and HM ASVAB composite

	Percent of NORC sample		
	A-school	C-school	
Aptitude category	(VE + MK + GS > 144)	(VE + AR > 105)	(VE + AR > 110)
1	100.0	100.0	100.0
2	99.2	98.8	87.1
3U	91.0	62.6	19.5
3L	61.4	4.7	0.7
4	7.0	0.0	0.0

Table A-1 gives the proportion of the NORC sample that meets the A- and C-school ASVAB requirements by aptitude category group. For the A-school requirement, table 1 of the main text claimed that students in aptitude category 3L and above meet the requirement. The NORC sample distribution indicates that 71.6 of aptitude category 3L meet the requirement and only 7 percent of aptitude category 4 meet the requirement. For the C-schools, aptitude categories 2 and 3U were used as approximations for the two requirement composites. These approximations appear to be quite good, as over 87 percent of aptitude category 2 recruits meet the 110 composite and less than 20 percent of the aptitude category 3U population does. Almost 63 percent of aptitude category 3U recruits meet the 105 composite requirements; less than 5 percent of aptitude category 3L do.

Another assumption made in using this approximation is that the

youth population sampled by NORC accurately reflects the population in the Navy. Previous studies compared NORC's data base with representative military samples and concluded that results obtained from analysis of NORC data could be extended to male military applicants. A random sample of almost 2,500 individuals was taken from the June 1985 Enlisted Master Record (EMR). The distribution of this sample by AFQT group and ASVAB is given in table A-2. As in the case of the NORC sample, the aptitude category approximations appear to be sufficient. In addition, the correlations between AFQT and the two (A- and C-school) HM composites were computed. Both correlations are high--0.85 for the A-school ASVAB composite and AFQT correlation and 0.94 for the C-school ASVAB composite and AFQT correlation.

Table A-2. Distribution of EMR sample by aptitude category and HM ASVAB composite

	Percent of EMR sample		
	A-school	C-school	
Aptitude category	(VE + MK + GS > 144)	(VE + AR > 105)	(VE + AR > 110)
1	100.0	99.1	99.1
2	99.8	99.7	92.0
3U	93.8	65.4	29.3
3L	67.3	8.4	0.8
4	24.6	0.0	0.0

APPENDIX B

SUPPORTING DATA TABLES

APPENDIX B

SUPPORTING DATA TABLES

This appendix contains supporting data tables. Tables B-1 and B-2 can be used to compare the distribution of A-school students (by aptitude category) in the HM rating with other Navy enlisted ratings. These tables give the percent of total entrants in each aptitude category for selected A-schools for FY 1981 and FY 1985. The range of the distribution by aptitude category for the HM rating is large relative to other more technical ratings.

Table B-1. Distribution of A-school entrants by aptitude category for selected ratings, FY 1981

	Aptitude category (percent of entrants)				
Rating	1-2	3U	3L	4U	Unknown
AC	61.1	20.7	11.1	4.6	2.4
AE	36.6	24.9	17.9	17.7	2.8
AQ	65.2	19.8	7.8	4.5	2.7
AT	63.4	19.0	9.4	6.5	1.7
BT	38.1	20.7	14.7	22.9	3.7
CTM	74.9	17.0	3.8	2.9	1.4
DS	73.9	14.8	5.1	3.8	2.5
EM	61.7	15.4	10.3	9.7	2.9
EO	25.1	19.5	19.2	31.2	4.9
ET	78.7	13.4	4.8	2.5	0.6
ET-nuc	96.1	2.7	0.3	0.0	0.9
EW	79.3	12.9	5.1	1.6	1.0
FTG	76.8	14.2	5.2	2.4	1.4
FTM	76.2	15.3	4.5	3.0	1.0
HM	38.5	23.0	18.2	17.8	2.5
HT	38.0	25.1	19.2	14.9	2.8
MM	57.2	12.8	9.9	16.9	3.3
MS	19.4	20.3	19.2	34.2	6.9
OS	48.5	29.8	12.8	7.0	1.9
RM	17.4	16.6	20.6	41.3	4.1
SK	33.9	32.8	17.8	14.2	1.4

Table B-2. Distribution of A-school entrants by aptitude category for selected ratings, FY 1985

	Aptitude category (percent of entrants)				
Rating	1-2	3U	3L	4U	Unknown
AC	48.7	19.4	12.7	7.4	11.9
AE	36.6	19.4	17.4	22.3	4.4
AQ	51.0	24.2	12.4	6.9	5.6
AT	65.7	15.7	8.6	5.4	4.7
BT	32.0	11.8	10.3	38.9	7.0
CTM	63.0	16.5	8.4	4.4	7.7
DS	73.3	13.6	5.5	2.3	5.3
EM	31.7	21.1	16.9	17.6	12.7
EM-nuc	92.6	2.1	0.5	0.2	4.6
EO	10.7	14.4	18.2	50.9	5.8
ET	71.8	14.0	5.6	2.8	5.7
ET-nuc	92.0	1.5	0.4	0.2	5.9
EW-4YO	69.9	18.3	6.8	2.5	2.5
EW-6YO	51.1	18.6	11.8	7.5	11.1
FTG	71.7	14.1	6.6	3.2	4.4
FTM	67.1	17.4	5.3	3.3	6.8
HM	34.6	15.7	16.2	25.1	8.4
HT	26.5	18.6	18.9	28.1	8.0
MM	29.1	12.7	15.0	39.1	4.1
MM-nuc	93.3	2.1	0.4	0.2	4.0
MS	14.5	10.6	14.4	50.6	9.9
OS	42.6	26.8	15.2	9.2	6.2
RM	20.6	12.4	16.6	44.4	6.0
SK	36.9	27.4	15.8	8.7	11.2

Tables B-3 and B-4 give the C-school training load data for FY 1981 and FY 1985 by NEC. The list of HM NECs (and associated courses) were obtained from the NEC manual. The training load data were computed from the CNA Student History File. The training load (total training days divided by 365) is given by under-instructional (UI) and supernumerary (SP) training load.

Table B-3. Distribution of NEC training load (days/365), FY 1981

NEC	Follow		First term		Career		Total	
	UI[a]	SP[b]	UI	SP	UI	SP	UI	SP
8402	0	0	0	0	23	0	23	0
8404	51	8	25	3	7	1	83	12
8406	12	1	9	1	2	0	23	2
8407	0	0	0	0	0	0	0	0
8408	5	1	4	0	1	0	10	1
8409	0	0	0	0	0	0	0	0
8416	0	0	0	0	0	0	0	0
8425	0	0	15	0	121	2	136	2
8432	6	1	8	1	6	1	20	3
8433	1	0	1	0	1	0	3	0
8444	4	0	3	0	0	0	7	0
8445	0	0	0	0	0	0	0	0
8446	4	0	0	0	0	0	4	0
8451	20	1	10	1	2	0	32	2
8452	21	0	17	1	12	0	50	1
8454	4	0	4	0	1	0	9	0
8463	2	0	4	0	5	0	11	0
8466	0	0	2	0	1	0	3	0
8472	1	0	1	0	2	0	4	0
8477	0	0	1	0	0	0	1	0
8478	0	0	0	0	0	0	0	0
8482	64	2	12	1	5	0	81	3
8483	96	5	22	1	2	0	120	6
8485	4	0	1	0	0	0	5	0
8486	2	0	3	0	0	0	5	0
8492	0	0	0	0	0	0	0	0
8493	0	0	3	0	1	0	4	0
8495	0	0	1	0	0	0	1	0
8501	24	3	14	1	2	0	41	4
8503	0	0	1	0	0	0	1	0
8505	0	0	3	3	1	1	4	4
8506	66	1	38	0	17	0	121	1
Total	396	23	211	16	216	8	822	47

NOTE: Totals may not add due to rounding.

a. UI indicates time under instruction.
b. SP time indicates supernumerary time, i.e., time awaiting instruction, in interrupted instruction, or awaiting transfer.

Table B-4. Distribution of NEC training load (days/365), FY 1985

	Follow		First term		Career		Total	
NEC	UI[a]	SP[b]	UI	SP	UI	SP	UI	SP
8402	0	0	3	0	70	4	73	4
8404	118	28	24	6	20	6	162	40
8406	9	1	2	0	1	0	12	1
8407	1	0	0	0	0	0	1	0
8408	12	0	6	1	4	0	22	1
8409	0	0	0	0	0	0	0	0
8416	2	0	0	0	0	0	2	0
8425	0	0	1	0	102	4	103	4
8432	7	0	8	0	7	0	22	0
8433	1	0	2	0	3	1	6	1
8444	3	0	1	0	0	0	4	0
8445	0	0	1	1	1	0	2	1
8446	1	0	0	0	0	0	1	0
8451	12	1	3	0	1	0	16	1
8452	65	1	11	0	12	0	88	1
8454	4	0	0	0	1	0	5	0
8463	0	0	2	0	2	0	4	0
8466	5	0	3	0	0	0	8	0
8472	0	0	2	0	1	0	3	0
8477	2	0	10	1	10	1	22	2
8478	0	0	4	0	22	1	26	1
8482	48	4	6	0	0	0	54	4
8483	119	6	9	0	1	0	129	6
8485	6	2	2	0	0	0	8	2
8486	2	0	2	0	0	0	4	0
8492	0	0	0	0	0	0	0	0
8493	0	0	2	1	2	1	4	2
8495	2	1	1	0	0	0	3	1
8501	41	4	9	0	3	0	53	4
8503	2	0	1	0	0	0	3	0
8505	5	0	1	0	3	0	9	0
8506	76	2	25	1	12	0	113	3
8541	6	1	3	0	1	0	10	1
Total	550	52	144	15	282	19	976	86

NOTE: Totals may not add due to rounding.

a. UI indicates time under instruction.
b. SP time indicates supernumerary time, i.e., time awaiting instruction, in interrupted instruction, or awaiting transfer.

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19. ABSTRACT (Continue on reverse if necessary and identify by block number)

This research memorandum compares the entrance standards for A-school and C-school training in the Hospital Corpsman rating, estimates the number of recruits who do not meet the higher C-school standards, and assesses the potential for shortages in C-school training. The factors that influence A- and C-school performance were analyzed to assess the effect of changes in entrance standards on average training performance. Finally, policy options to increase the pool of eligible personnel for C-school training were evaluated. These options either raised A-school standards so that a higher proportion of graduates were from the upper aptitude categories or changed C-school standars to allow a higher proportion of graduates to attend.

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